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duces. A few heads, on the contrary, possess features of a most lively expression : the two children, for instance, who are looking at a flute-player; those who are amusing themselves by blowing bubbles; the portrait of Boissieu's brother; a three-quarter male figure; and two others in the print where a man is being shaved, surprise you by the boldness of their relief and their animated appearance. Such, too, is the old rogue with a cap nearly reaching down to his shaggy eye-brows, beneath which his suspicious-looking, penetrating, and perfidious eyes assume a formidable expression. Yet these same heads, which are so striking in appearance, and so admirably executed, are void of nobleness and grandeur, and no reflection of a single elevated sentiment is perceptible in them. Observation, *finesse* and cunning, are all that the engraver has been able to represent; and these form, in his eyes, all the phases of moral life. His "St. Jerome in the Desert," for instance, is writing very attentively, but no inspiration is there to light up his look, or to impart any appearance of idealism to his features. The landscape, which is rigidly beautiful, possesses more expression than the face of the saint; and the man is thus rendered inferior to the inanimate objects by which he is surrounded. Boissieu, it is evident, lived too much in solitude and sought too much after calm: it is necessary for the artist, as well as for the poet, that he should himself attentively study the workings of the higher passions, which are to be met with only in the bustle of active life. Goëthe himself, in consequence of keeping continually out of society, lost, at last, the vigour of his brilliant days; and finished by writing works almost void of sense, and full of chimerical visions.

Boissieu was more successful with nature than he was with the human face. His landscapes are very fine: in them vigour is joined to delicacy, and elegance to truth. The drawing is always full of energy in the *tout ensemble* and of *finesse* in the details. Here we see the beautiful effects of light and shade bringing out every object in bold relief, while in another place are seen fugitive lights, carefully managed gradations, and backgrounds of the most exquisite lightness. No trace of negligence or of hurry is anywhere to be discovered in them; but everything is, on the contrary, of the most perfect finish. The foliage of the trees, the movement of the motionless splendour of the water, the canals, the forms of the land, the winding or broken lines of the rocks, and the magic of the perspective are all represented in the most successful and varied manner. A few artists have reproached Boissieu with having exaggerated the brilliancy of the light parts of his foliage to such an extent as to produce the effects of snow: this defect, however, can hardly be said to exist except in the bad copies, in which the details of the light parts have disappeared. It must be owned, however, that Boissieu was not always successful in

the execution of his clouds, which might often be taken for mere daubs instead of moving vapours.

But though the works of Boissieu are open to certain criticisms, he himself is none the less on that account the greatest etcher that France ever produced. His drawings are executed in such perfection, that many of them are as valuable as oil paintings, and some of them have even been sold for £120 sterling each. Though they are all characterised by such wonderful delicacy in their execution, Boissieu yet worked very quickly. A skilful draughtsman of his time, having seen him work, was thoroughly astonished at the rapidity with which he completed everything he began; the artist in question did not think it possible for so perfect a finish to be obtained with such promptitude, and was seized with a fit of discouragement, which lasted him a fortnight.

Boissieu also painted some pictures of subjects similar to those painted by Ostade; but he owes all his fame to his etchings, which he executed in so masterly and picturesque a manner. The number of his plates is, according to M. Dugas Montbel, a hundred and seven, which are generally marked D. B., with the date. Monsieur Guichardot, who has studied the works of the celebrated engraver more than any one else, possesses, or is acquainted with, a hundred and forty-two of his prints; and as this gentleman has devoted forty years of his life to the works of Boissieu, his opinion ought to be taken as an authority.

The following are among the engraver's best prints:—

"An Old Man, with a Boy Reading," in the manner of Rembrandt.

"A Cooper working in a Cellar;" after the same.

"An Italian Landscape, with Women washing."

"A Landscape with Shepherds by the water-side;" after Berghem.

"A Forest with a Cottage, and a Man on Horseback, with Peasants."

Another "Forest Scene," the companion to the above.

"A Landscape with Figures and Animals, having in the middle a Hill, on which is a Cross and an Old Man kneeling."

"A View near Zurich, with a Man and a Woman mounted on a Mule, and driving Cattle through a rivulet."

"The Quack Doctor;" after C. du Gardyn.

"A Landscape with Figures in a Boat, and a Mill;" after Ruysdael.

"The Great Mill," a charming landscape; after the same.

"A Mountainous Landscape, with a Waterfall;" after Asselyn.

"A Grand Landscape, with a Hermit at the entrance of a Cavern," 1797.

"A pleasing Landscape with large Figures, and two Cows standing in the water."

BALLOONS AND BALLOONING.

In the advance of mankind, all things, even apparent obstacles, promote incessant progress. Expressions of doubt in every form, the host of sceptical and envious men, favour that improvement which they gainsay; plagiarists extend its influence while they render its effects popular; everything conduces to progress.

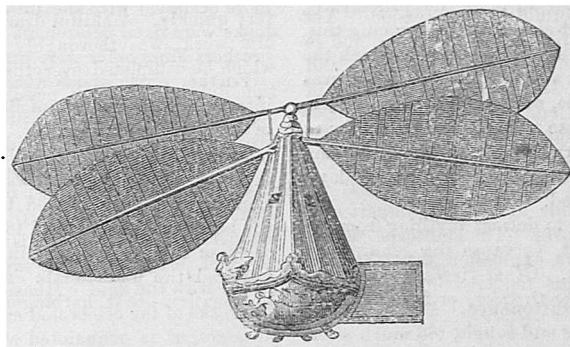
The germ of those successive discoveries, which men of genius from age to age disclose, and which each generation develops, existed from the beginning of time. When the veil which covered them is drawn aside by the skilful or fortunate hand of one of real genius, numbers of envious spirits, anxious to darken the rising glory, ransack the dreams of the past, which turn out sometimes to be the foreshadowing of the future. They there seek to prove that the idea which has just arisen is not new, that the progress is illusive. The man whom they lately admired, far, in their opinion, from meriting universal gratitude, has only meanly attributed to himself the merit of another, by bringing to light the

invention buried by an unknown scholar in some old worm-eaten book. These efforts, these struggles to deprive the inventor of his legitimate reward, his glory, may darken and disturb his life, but cannot silence the echo of the divine word, of which the man of genius is but the voice, and, in spite of the envious, the future will recognise the name of such discoverer.

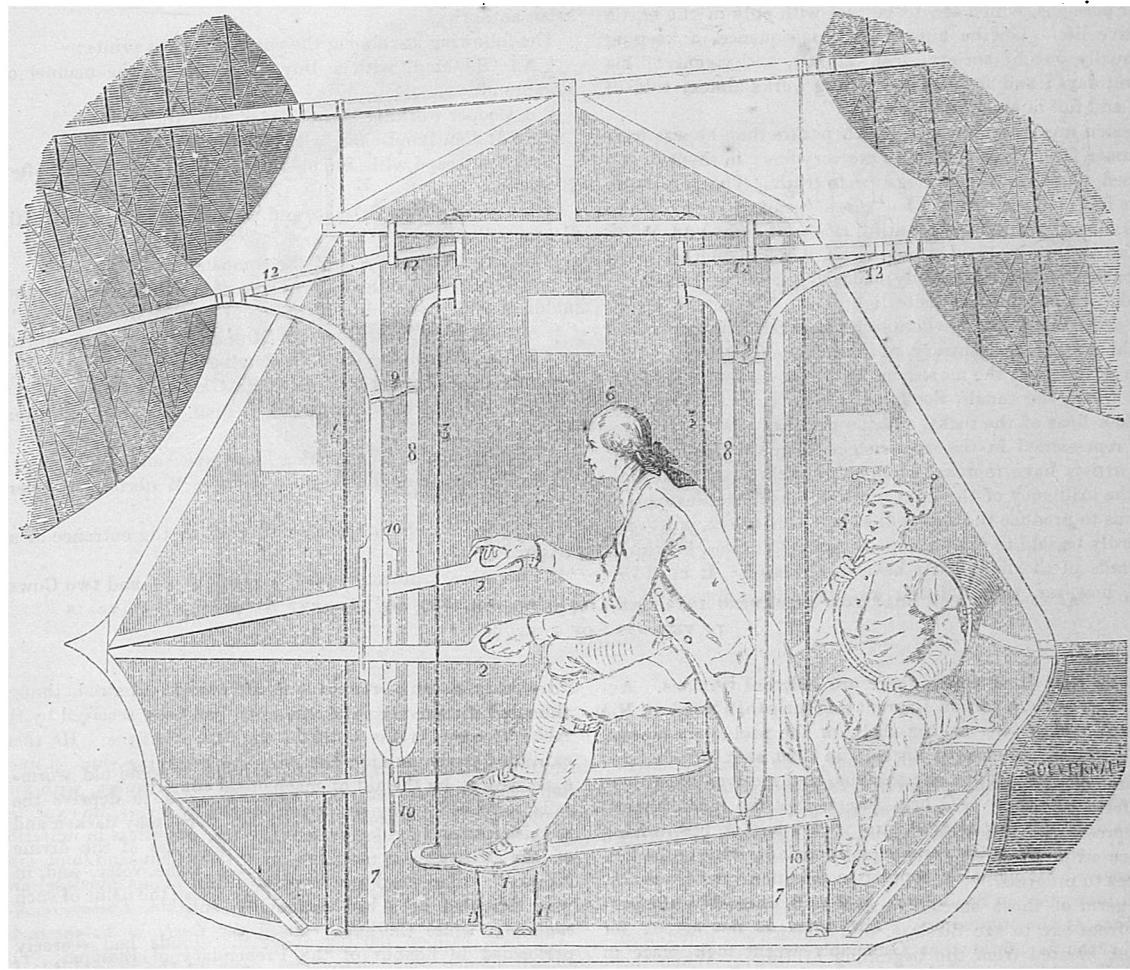
The first balloon darting above the clouds had scarcely imposed silence upon those who, denying the possibility of ascending into and traversing the air, taxed with folly the attempts made for this purpose, than these same people hastened to assert that the discovery was not new. The secret of flying through space was known to the ancients, said they; Icarus, the magician of Thrace; the prophets transported to heaven; Simon, the sorcerer; fable and history, down to Cyrano, of Bergerac, and his ingenious projects for travelling across the moon and the sun, were brought forward and set in opposition to the young aeronauts. These forerunners,

however, were strange rivals ; envy could not content herself with them, and brought to light the rare and unknown work of Père Lana. This Jesuit spoke of aerial navigation as a scientific amusement ; the flying ship which he described was surmounted by four spheres of thinner copper (he specified the thickness) than had ever been seen before. To produce

off by turning the taps and promptly turning them back. The process, as may be seen, was simple. This pleasantry, which appeared in print at Brescia, in 1670, a few years after the death of Pascal, and which was founded upon those ideas which had given rise to the experiments of this great man upon the weight of the air, was seriously brought



EXTERIOR OF BLANCHARD'S FLYING SHIP.



BLANCHARD'S FLYING SHIP.*

the vacuum which was to lighten the boat, the good father advised filling these spheres with water, which was to be let

forward as the origin of the invention of balloons. Then they spoke of Galien, a Dominican monk, the author of

* 1, Pedals in the form of levers of the second kind ; 2, Plyers in the form of levers of the second kind ; 3, Connecting lines which raise the pedals alternately ; 4, Cords which serve to move the leading wings ; 5, Travelling companion ; 6, Pilot ; 7, Posts which support the top ; 8, Supporting ropes which move the wings by

means of the pedals ; 9, Connecting strings to prevent the separation of the ropes ; 10, Slides which prevent the displacement of the pedals and plyers ; 11, Connecting cords which are attached under the pedals, and pass under the pulleys at the bottom of the keel ; 12, Principal appliances for trimming the sails.

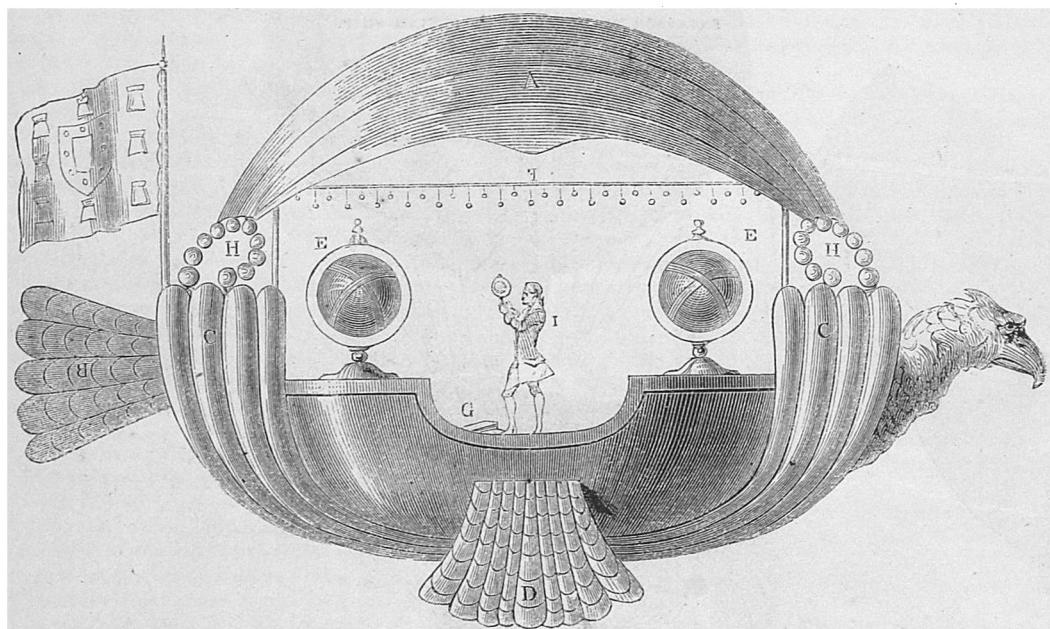
a pamphlet as little known as the work of Lana—a book in which, among other physical and geometrical amusements, was described an immense cubical vessel, measuring above 1,350,000,000 fathoms, longer and broader than the town of Avignon, weighing 12,000,000 cwt.—a weight, the monk affirmed, ten times greater than that of Noah's ark. To raise this gigantic machine above the clouds, Galien, giving to the side of the ship a height of more than 113 fathoms, in order that the lower strata of atmospheric air might not penetrate it, filled it afterwards with rarified air. How to procure this, how to stow the etherial fluid, was a subject upon which the speculative monk had never felt any uneasiness. There was nothing practical, nothing possible, even in his own eyes, in this play of his imagination. These were the mere hypotheses of an intelligent, learned, solitary man, who, though taking pleasure in his dreams, had not an idea that even the least part of them would ever be realised.

These precursors had no power to detract anything from the glory of the brothers Mongolfier, or cause the genuineness of their discovery to be doubted. Other rivals were sought for, and then came the story of the *Ovoador*, or flying man—a

of Paris nor in those of Turin, in both which places it was pretended to have been seen. The engraving below, taken from the library of the Rue Richelieu, in Paris, the only trace which we have met with of the pretended invention of Guzmao, we reproduce in all its strangeness, with the annexed explanations.

This dream seems even more fantastic than those of Lana and Galien. The truth is, that the imagination was more and more occupied with the idea about to be realised, and many looks were fixed beforehand upon those new routes which the brothers Mongolfier were preparing to lay open to all.

Further experiments were made, and wings were brought into use. The Marquis of Bacqueville set sail from a window of his hotel upon the quay, and alighted upon the boat of a laundress in the river. The Prebendary Desforges, of Etampes, invented a carriage which was intended to fly; but, in proportion as he rapidly moved the wings which were to raise it, the heavy machine seemed to sink into the earth. The history of these failures appeared in verse; vaudevilles and mockery followed the unfortunate experimenters, as if to discourage imagination—that harbinger of genius. Blanchard, whose



A DRAWING OF THE BOAT FOR ASCENDING INTO THE AIR, INVENTED 1709, BY LAURENT DE GUZMAO, CHAPLAIN TO THE KING OF PORTUGAL.*

confused legend, of which there are different versions. According to some, a certain Laurent de Guzmao, a monk of Rio Janeiro, having seen an egg-shell, or the peel of an orange, float before the window of his cell, in 1720, sent off a balloon to the amazement of his companions, and received from them the title of *Ovoador*. Others assert, that the monk himself ascended, at Lisbon, in 1736, in a wicker basket, before King John V., as high as the cornice of the palace, whence he fell. He received his name by popular acclamation, and his death, which took place in Spain, was, it is said, caused by the persecutions of the inquisitors. The dates do not agree; for other accounts affirm that Guzmao's ascent took place in 1709. To confirm the truth of this anecdote, a Spanish manuscript was quoted, which is neither to be found in the archives

* A, Sails to sustain the boat; B, Rudder; C, C, Bellows to supply any failure of wind; D, Wings to support the machine; E, E, Magnet, enclosed in two globes of metal, attracting the body of the boat lined with plates of iron; F, Iron wire, upon which are hung a number of pieces of amber to attract the matting of rye-straw which carpets the interior of the boat; G, Mariner's Compass; H, H, Pulleys to let fly the sails; I, Space for ten travellers and the pilot who directs the manœuvres.

intrepidity as an aeronaut was afterwards admired, though ridiculed for unsuccessful attempts, had been received by the Abbé Viennoy in his hotel in the Rue Taranne. He there exhibited to the public what he called his flying-ship—a lined case, which, by the aid of mechanical contrivances, with four sails, ten feet long by six broad, moved by levers, he expected to raise into and guide through the air, doubtless in imitation of the Mussulman magician, in "The Thousand and One Nights." Blanchard remained steadfast to his purpose, and was ridiculed in a bad vaudeville, entitled, *Cassandra Mechanicien*; while Cailhava caused the *Cabriolet Volant* to be performed in honour of the Prebendary of Etampes. The engraving which we reproduce (p. 79), in spite of the serious explanations which accompany it, must be a caricature, to judge from the singular personage, dressed in a fool's cap and bells, who strikes up a flourish in the ears of the inventor.

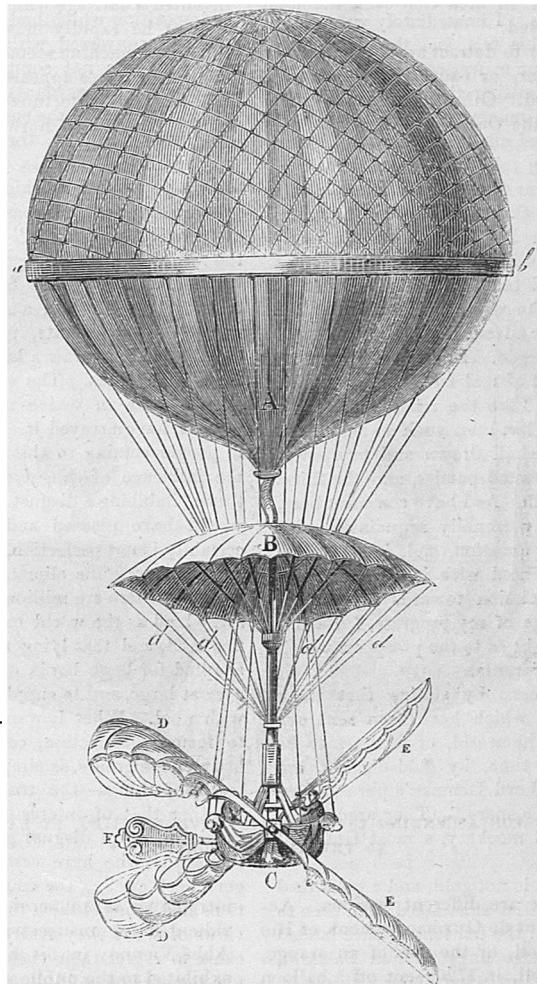
These experiments of Blanchard took place at the end of 1782. In the same year, Etienne, one of the MM. Mongolfier, in his private correspondence, had communicated to M. Desmarest, of the Academy of Sciences, the invention of the balloon, which the two brothers, Etienne and Joseph, then called a *diostatic machine*, because it sustained itself in the

air. In spite of the perspicuous and clear explanations of the inventor, and perhaps on account of their perfect simplicity, the academician understood nothing about them, and replied, "As I do not understand your ascending machine, I have not been able to make any use of all you have told me about it at different times." Probably he classed this invention in the category of delusions so common to that epoch.

Shortly afterwards the discovery became generally known by the experiments of the 5th of June, 1783, made in the presence of the deputies of the state of Vivarais. The idea, so simple in its grandeur, was too easy of application not to find many imitators, and Blanchard was one of the first. But the mechanist sought in his various ascents to make use of hi;

it is represented in the engraving. A pupil of the Military School, named Dupont de Chambon, was obstinately bent upon setting out with the travellers; repulsed by them he forced his way, sword in hand, into the gondola, wounded Blanchard, tore the rigging, broke the oars or wings, and the aeronaut was reduced to the necessity of ascending alone some hours later, by the usual means, after having mended his balloon as well as he was able.

Blanchard might have learnt from the inventors the uselessness of the oars which he endeavoured to employ in several subsequent ascents. The brothers Mongolfier had considered, among many other means of guidance, the use of oars, and had rejected them. Joseph wrote to Etienne towards the end



THE FLYING SHIP. THE FIRST EXPERIMENT WHICH BLANCHARD WAS TO HAVE MADE, MARCH 2, 1784, FROM THE CHAMPS DE MARS, ACCOMPANIED BY DOM PECH, A BENEDICTINE MONK.*

former mechanical contrivances; thus, on the 2nd of March, 1784, he prepared to depart from the Champs de Mars, in the balloon which he called his flying ship, to which he had attached six wings.

Blanchard and his companion Dom Pech, a Benedictine monk, were prevented from ascending in the balloon, such as

* A, Aerostatic globe filled with inflammable air, and attached to the hoop, *a, b*; B, Parachute, the ribs of which are secured to the axis, or stick, by the strings *d, d, d*; it is not intended to sustain the machine in the air, excepting in case of an accident happening to the globe, when it serves to break the violence of the fall; C, Boat, carrying the travellers, suspended and fixed to the axis, or stick of the parachute; D, E, Oars moved alternately by the travellers; F, Rudder.

of the year 1783:—"Pray, my good friend, reflect, calculate well; if you employ oars, you must either make them large or small: if they be large, they will be heavy; if they be small, you must make them move with the greater rapidity. Let us make the estimate on a globe of a hundred feet in diameter." After having made this calculation, he arrived at the conclusion that the power of thirty men, exerting themselves so that they could not keep on fifty minutes without resting, would not suffice to make the balloon go six miles an hour. "I do not see any efficient means of guidance," continues Joseph, "except in the knowledge of the different currents of air which it is necessary to study; they generally vary according to the elevation." This idea, common to both the brothers, often recurred to their minds.